

Living Classrooms Foundation
802 S. Caroline St. Baltimore, MD 21231
EPA Environmental Education Award Final Report No. NE96366001
9/1/19 – 8/31/21
Masonville Cove Environmental Education Programming

Overview

Located in Baltimore City, Maryland, this project focused on the implementation/expansion of environmental education at the Masonville Cove Environmental Education Campus (MCEEC). Project goals included: 1) an advanced expansion of the School Leadership in Urban Runoff Reduction Project (SLURRP) in two Baltimore City Title I high schools, serving 120 students with in-school outreach, environmental-focused service learning, and assistance with meeting Maryland's Environmental Literacy standards, and 2) Community Engagement events and programs for 1,000 residents of all ages in environmental literacy activities and hands-on stewardship. Program objectives were to increase participants' environmental knowledge of storm water runoff (causes, sources, and how to prevent it), provide an awareness of land use and local environmental issues, inspire behavioral change, reduce litter, and promote/increase environmental stewardship in the community.

Activities and Deliverables

School-based Programs:

The grant program was designed to serve approximately 120 (9th-12th grade) students at two Title I Baltimore City high schools: Benjamin Franklin High School at Masonville Cove and New Era Academy. Despite the interruptions caused by the COVID-19 pandemic, LCF was successful in meeting and exceeding the goals of the grant. In June 2020, the program completed service to 180 students from these schools: three Biology classes from New Era Academy (120 students) and two Biology classes from Ben Franklin HS (60 students).

Before the pandemic (between September 2019 and March 2020), MCEEC staff implemented five classroom outreach programs and one field trip to MCEEC. Classroom teachers were also trained to teach a SLURRP lesson on Wiki-Watersheds and they conducted a community clean up. When the COVID-19 pandemic struck in early 2020, Maryland State Department of Education closed all schools on March 13. In April, emails requesting amendments to the program and budget were sent to EPA program officer Kathleen Kirkland. Approval was given for changing the remaining classroom outreach and field trips to distance learning activities, changing community-based activities to a digital medium, and shifting budgeted transportation funds to supplies. Additionally, a no-cost extension of the award to 8/31/21 was granted.

From April - June 2020, the MCEEC staff implemented several creative strategies to continue this project, to provide support to the schools and local communities, and to continue to promote environmental stewardship. First, the MCEEC team connected with the SLURRP teachers to learn how best to support Baltimore City's "continuity of learning" and how our lessons might fit in to the distance learning environment. As a result, a "virtual field trip" to MCEEC was developed for our partner schools and teachers assigned this to students as part of their online classwork. The field trip included a mapping activity, marine biodegradation video and activity,

a virtual shoreline cleanup with instructions for doing a clean-up at home, and a virtual Captain Trashwheel activity. A SLURRP Action Project guide was distributed to assist students with the creation and implementation of projects they could do at home to prevent pollution and promote clean water. In addition, a series of five STEM career videos were made for SLURRP students. These featured professionals in different STEM fields talking about the work they do and their qualifications.

A host of other virtual/distance learning activities were created and featured on the Friends of Masonville Cove Facebook page (<https://www.facebook.com/MasonvilleCove>), the MCEEC newsletter, MCEEC website (<https://www.masonvillecove.org/onlineresources>), and the Living Classrooms' website (<https://livingclassrooms.org/living-classrooms-distance-learning-library/>). These were accessed by teachers, students, and the general community. Activities included videos and accompanying activities on plankton, monarch butterfly migration, a “creature feature” of Squirtle the Diamondback Terrapin, seed dispersal, nature mysteries, animal habitats, and the science of puddles. We received lots of feedback from teachers saying that they appreciated having these fun and informative online lessons to engage the students.

Additionally, the MCEEC team produced and distributed 1,000 “STEAM Activity Boxes” to the local community. The closure of schools and abrupt shift to distance learning left many Baltimore City families struggling to engage their children. Many families did not have the technology to connect to digital learning, or did not have internet connection, or had only one device and multiple children who needed to share it. The STEAM activity boxes were designed to combat the loss of learning and disengagement that occurred as a result of pandemic-related closures. These boxes contained materials and directions for 5 hands-on learning activities for elementary school students. There was one activity for each of the STEAM disciplines (science, technology, engineering, art, math). They were a fun, active, and engaging way to connect with students and families, as well as deliver outcomes from our environmental education programming. The boxes were made available at City Schools' food distribution centers on multiple days and all of them were taken. Feedback from teachers and parents was unanimously positive, and all seemed grateful for hands-on activities.

Community Programs

During the grant period, over 1,900 community members engaged in MCEEC programming. Prior to the pandemic, Masonville Cove was open to the public and hosted hundreds of birders, hikers, geocachers, and families. For example, MCEEC celebrated National Urban Refuge Day on 9/29/19. Vans were provided as shuttles to the campus from the local library and 55 community members attended. Featured activities included guided kayak tours, monarch butterfly tagging, songbird identification, and outdoor games for families. This day was also noteworthy because the nominee for USFWS Director, Aurelia Skipwith, spent the day touring and kayaking at the site.

In March 2020, the MCEEC was closed to the public due to the pandemic. While the education center remained closed, the campus re-opened in June 2020 for hiking, birding, and geocaching, and there were some registration-only outdoor programs offered. In addition, there were multiple shoreline cleanups that resulted in removal of over 2,100 pounds of trash. In August 2020, the

Masonville Cove Virtual Summer Science and Nature Program engaged 17 youth who received backpacks overflowing with art supplies, exploration guides, and 5 STEM activity kits based on the themes Water, Soil, Plants, Food Webs, and Living Organisms. Students participated in 2-hour virtual live sessions with educators where they performed experiments as a group, played games, and showcased/shared their crafts, data and conclusions. On 9/28/20, the Masonville partnership hosted more than 90 individuals at the annual Urban National Wildlife Refuge Day and Bioblitz, which was conducted outdoors with social distancing and mask requirements.

Innovation and Modeling of Best Practices

This grant program was designed to be both interdisciplinary and modeled after the EE best practice, Meaningful Watershed Educational Experience (MWEE), a learner-centered experience that focuses on investigations into local environmental issues that lead to informed action and civic engagement. Through three outreaches, three related community service projects, and two teacher-led lessons spaced throughout the school year, students used critical thinking, observation, and data collection to answer the question, “What is storm water runoff pollution, and how can we help prevent it?” The program targeted critical connections between environmental science, reading, writing, and math. During the year-long program, MCEEC educators guided students through the preparation, action, and reflection phases of the MWEE. Teachers participated in one professional development workshop led by LCF staff that prepared them to teach two additional SLURRP lessons to their students.

Successes, Problems, and Discrepancies

Despite the significant COVID-19 interruptions, such as the shutdown of Baltimore City schools, State-wide “stay at home” order, and subsequent distance-learning implemented by City Schools, MCEEC and sub-award partners were successful in meeting the goals of the grant through the creative strategies described above. Unfortunately, due to pandemic circumstances, we were unable to administer post-program surveys to students. We are very grateful for EPA’s support, flexibility, and commitment to the community during this challenging time.

Funds

Masonville Cove Environmental Education Programming						
NE96366001 Final Expenditure Report						
1/1/2021-8/31/2021						
Organization: Living Classrooms Foundation				Contract Period: 9/1/19 - 8/31/21		
Federal Tax Identification Number: 52-1369524				Reporting Period: 1/1/2021-8/31/2021		
Fiscal Contact Person: Cindy Wadalavage				Contact Phone Number: 410-685-0295		
Description	Approved Budget	Current Period Expenditures	Prior Period Expenditures	Year-To-Date Expenditures	Recipient Contribution Budget	Recipient Contribution Total Expenditures
Personnel/Contracted Services						
Salaries	31,563.00		31,145.35	31,145.35	37,725.00	37,725.00
Fringe	5,681.00		6,098.65	6,098.65	6,791.00	6,791.00
Subtotal Personnel	\$ 37,244.00	\$ -	\$ 37,244.00	\$ 37,244.00	\$ 44,516.00	\$ 44,516.00
Other						
Supplies	966.00		966.00	966.00	-	
Subtotal Supplies	\$ 966.00	\$ -	\$ 966.00	\$ 966.00	\$ -	\$ -
Other						
Sub-awards: 3 grants @ \$5,000 each	15,000.00	5,000.00	10,000.00	15,000.00	-	
Subtotal Other	\$ 15,000.00	\$ 5,000.00	\$ 10,000.00	\$ 15,000.00	\$ -	
Subtotal	\$ 53,210.00	\$ 5,000.00	\$ 48,210.00	\$ 53,210.00	\$ 44,516.00	\$ 44,516.00
Indirect Costs / 18.23%	\$ 6,790.00		6,790.00	6,790.00	\$ 8,115.00	\$ 8,115.00
TOTAL	\$ 60,000.00	\$ 5,000.00	\$ 55,000.00	\$ 60,000.00	\$ 52,631.00	\$ 52,631.00

*Note: The original award budget included a \$500 travel line item for field trips to MCEEC. Due to the pandemic, students were unable to participate in field trips. On 5/19/2020, EPA Program Officer Kathleen Kirkland approved the shift of these travel funds to the supplies line in order to support distance learning measures.

Sub-grants

Baltimore Community ToolBank: This local community non-profit hired an Outreach Coordinator to provide stormwater management education to a diversity of local student and business audiences. They developed online content, virtual tours, and virtual field trips focusing on the importance of re-purposing runoff in an urban setting; the value of native plants, pollinators and habitat creation; the harm of unmitigated storm water runoff; and the benefits humans reap from a healthy, sustainable city/neighborhood. In summer 2020, ToolBank partnered with the Parks and People Foundation to provide virtual tours and field trips to students in two of their virtual summer programs. ToolBank also created zero-waste lesson packets and hosted virtual field trips for 50 students in Superkids Camp, a six-week enrichment program designed to help elementary school-aged students improve and maintain scholastic skills during summer months.

ClearShark H2O: This local non-profit provided a series of oyster-based environmental education programs to Masonville-area schools and the community. Prior to the COVID19 shutdown of schools, Clear Shark H2O provided in-person programs to community members at MCEEC, and to 7th grade students at Brooklyn Park Middle School. The programs featured an oyster-tonging game, oyster dissections, and discussions about Chesapeake Bay pollution,

runoff, industrialization, and consumerism. They also hosted a field trip to the Horn Point Environmental Laboratories, where students got a tour of the oyster hatchery. With the onset of COVID-19 and the inability to meet with students in person, they developed a virtual Creative Nature video series that covered a wide range of environmental topics. The videos discussed the beneficial effects of the topic on the environment and encouraged environmental stewardship by providing information on what individuals can do to help. In addition to being shared on ClearShark H2O's and Friends of Masonville Cove's social media pages, some of the videos were also re-shared by other organizations such as the Arlington Echo Outdoor Education Center. In total, more than 9,600 people were reached through the series of 21 videos.

National Aquarium: Initially, the Aquarium was going to use the subgrant to work with students at a Baltimore City Recreation Center, but due to the closures of all centers because of COVID, the original plan was adapted. In summer 2020, some city recreation centers re-opened and the National Aquarium engaged 23 students and 21 adults in nature exploratory programs through the Farring Bay Brook Recreation Center, Lakeland Recreation Center, and The Well (a local women's mentoring nonprofit). Activities included watershed studies, nature journaling, and mindfulness exercises such as meditation and yoga. All events were hosted in three local green spaces (Farring Bay Brook Park, Lakeland Park, and the Curtis Bay Recreation Center Park). As part of their subaward, the National Aquarium engaged 28 adults during the International Coastal Cleanup Day on October 10, 2020. The group collected over 280 lbs. of debris from the shoreline at the Masonville Cove Environmental Education Campus. National Aquarium staff also served 40 students and 3 adults on December 10, 2020 with a virtual nature and ornament-making workshop through the Farring Bay Brook Recreation Center. They assembled and distributed individualized supply kits for students to create natural ornaments. From January-March 2021, the National Aquarium continued their community outreach through a Virtual Bird Feeder Craft activity for the Farring-Baybrook Recreation Center. National Aquarium staff created bird feeder craft kits for students that were picked up by families at the recreation center, then hosted a live virtual session on how to create the feeder. This program served 40 youth and 3 adults. The National Aquarium coordinated with the Brooklyn Branch of the Enoch Pratt Library System to conduct a virtual program on April 22, 2021. The program was attended by 41 students. It introduced students to Masonville Cove and the things you can do to enjoy the outdoors there. This was followed by a story time and a virtual field trip. They also provided the library with "make and take" packages that families could pick up that included Masonville brochures, bookmarks, folding binoculars, stickers, and program flyers. On April 26, 2021, the National Aquarium hosted an in-person Earth Day program for the Brooklyn Boys and Girls Club. National Aquarium staff members led 13 students through a community science program at local Garrett Park. The students were given biodiversity backpacks and encouraged to discover what kinds of species are found in the local community park. Students used the iNaturalist app to record and report what they found. Over the summer of 2021, National Aquarium staff participated in a 8-week summer camps conducted by the Farring Baybrook Recreation Center, the Boys and Girls Club Brooklyn Branch, and Curtis Bay Recreation Center. Twice per week, National Aquarium staff led hands-on activities for 76 youth that focused on habitat, pollinators, urban green spaces, nature crafts, and outdoor exploration.

Summary

EPA educational priorities addressed	EPA Educational Priority 2 (Community Projects)
Educational methods used (e.g., workshops, place-based/outdoor, web-based learning, etc.)	Teacher training workshops In-class outreach programs Field trip to MCEEC Virtual Programming (synchronous and asynchronous) STEAM activity boxes Digital newsletter and Facebook posts
Environmental priorities addressed	EPA Environmental Priority 2b (Ensuring Clean and Safe Water)
Stewardship projects undertaken	Shoreline cleanups (removing over 2,100 lbs. of trash) Student action projects
Location(s) of project	Baltimore City, Maryland
Number of people reached (by category): Educators Students (K-8, 9-12, or college) Community members (adults, children)	4 teachers 180 students (grades 9-12) 1,900 community members
Number and dollar amount of sub-awards	3 sub-awards of \$5,000, totaling \$15,000
Dollar value of match provided (indicate whether in-kind or cash)	\$52,631 cash match